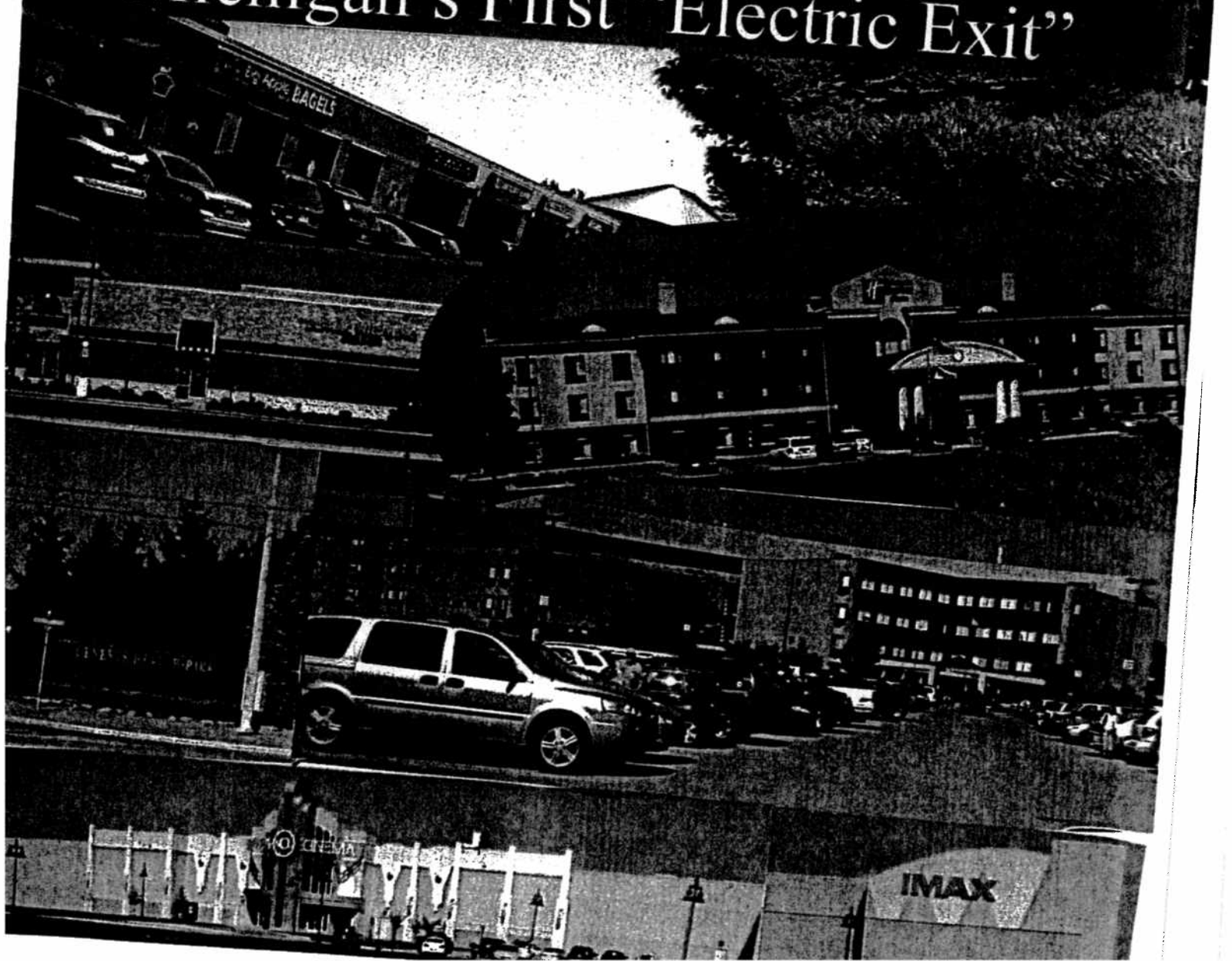
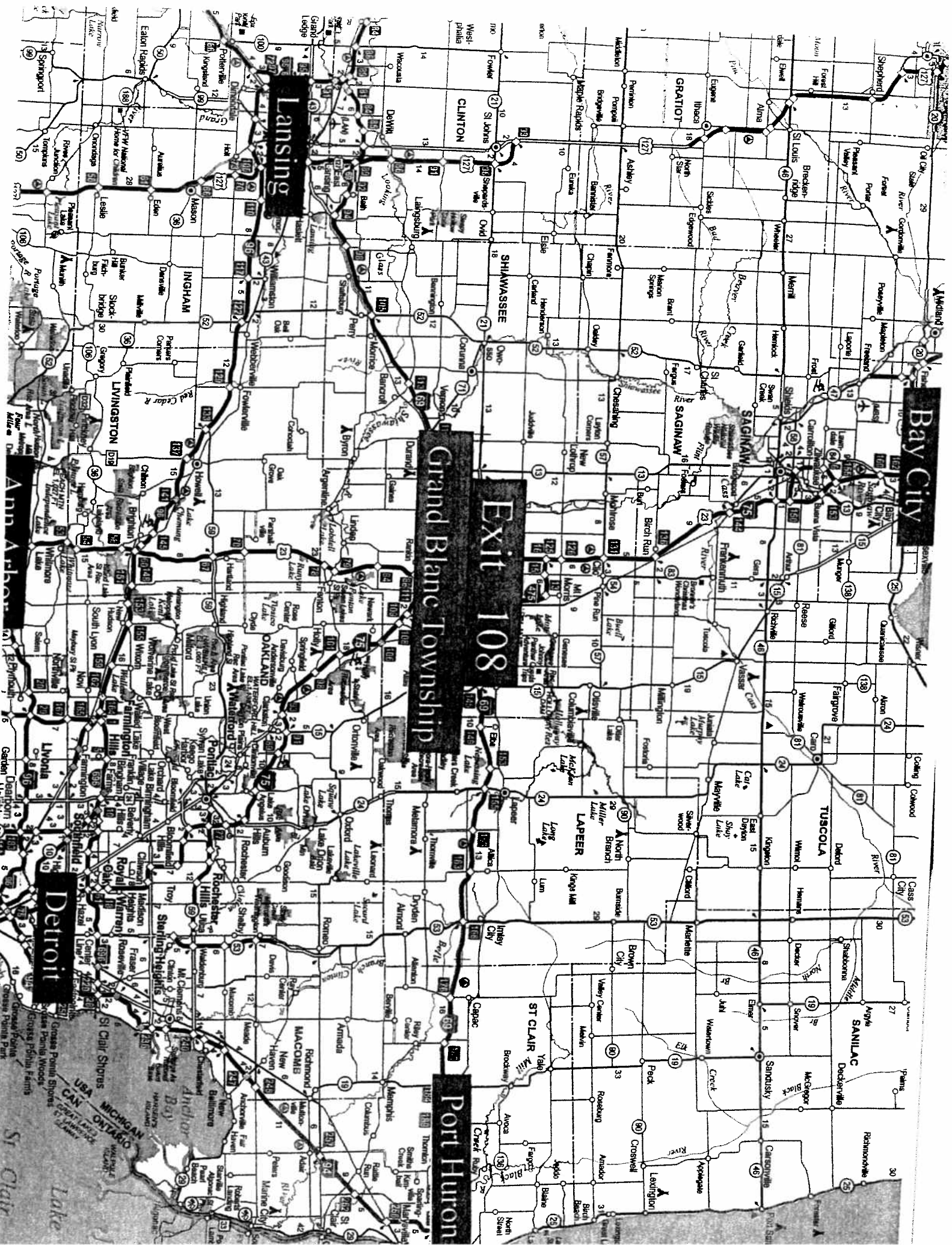




MICHIGAN  
PUBLIC  
CAR POOL  
PARKING

# Michigan's First "Electric Exit"





Bay City

Exit 108  
Grand Blanc Township

Lansing

Detroit

Port Huron

TUSCOLA

SANILAC

USA MICHIGAN CAN ONTARIO  
Lake St Clair

# ChargePoint®

by Coulomb Technologies

ChargePoint networked charging stations for plug-in vehicles are the industries most advanced infrastructure solution. When considering which product is right for your needs please review the points below:

- **Safety** - Ensure that the product provides the necessary safety features to eliminate the risk of injury when being operated by customers.
- **Revenue** - Customers pay for gas today and will soon be paying for electricity to fuel their vehicles. Ensure the product has a flexible revenue model that can change as the industry changes.
- **Support** - As our transportation system changes there are numerous vehicles being introduced that have different charging requirements. Ensure the product is capable of charging every type of vehicle.
- **Utilities** - As more plug-in vehicles connect to our electrical grid there will be a need for the utility to monitor and control charging during peak usage, just as they monitor air conditioners today. Ensure that the product provides a Utility interface.
- **Future Proof** - As the plug-in vehicle industry grows there will undoubtedly be changes required in charging features, billing, communications, etc. Ensure that you are investing in a product that is capable of growing with the industry.

The ChargePoint networked charging stations were designed with the above features in mind, providing a near future proof solution. Capable of charging virtually every vehicle that needs to plug-in, providing revenue to station owners and allowing the utilities to manage the demand are just some of the features the ChargePoint solution offers. To learn more contact your Shocking Solutions representative today.



Coulomb  
Technologies

Authorized Distributor

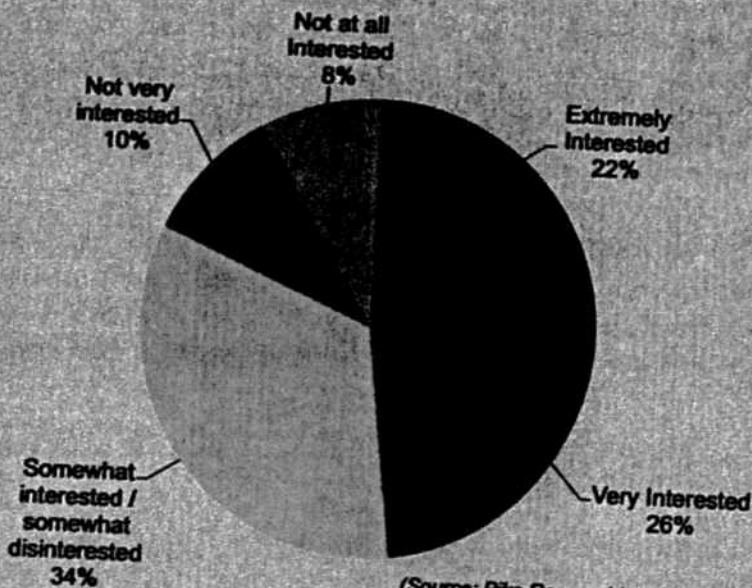


## Are you Prepared for our Transportation System to Plug-In?

2010 is going to be a year of change for many communities across our nation. Global automakers will begin selling Plug-In vehicles across the United States as we begin to transform our transportation system. This industry rebirth will give way to years of opportunities and job growth and it will also bring changes to the way we fuel our vehicles. Shocking Solutions is dedicated to helping communities prepare for Plug-in vehicles. If you are looking to prepare your community for Plug-in Vehicles or if you are preparing to transition your municipal fleet to Plug-in Vehicles our professional staff can help.

- Industry Consulting and Support Planning
- Advanced Infrastructure Deployment and Support
- Fleet Management Solutions

### Consumer Interest In Plug-in Vehicles



(Source: Pike Research)

# SHOCKING SOLUTIONS





Fueling the Electric Transportation Industry

## CT1000 AND CT2000

### CHARGEPOINT NETWORKED CHARGING STATIONS

The CT1000 and CT2000 families of ChargePoint™ Networked Charging Stations, manufactured by Coulomb Technologies, are specifically designed for the North American market. The CT1000 family of charging stations supports Level 1 (120V @ 12A) charging. The CT2000 family of charging stations supports both Level 1 and Level 2 (208V/240V @ 32A) charging.

The ChargePoint Networked Charging Stations combined with the ChargePoint Network Operating System (NOS) form a smart charging infrastructure for plug-in electric vehicles called the ChargePoint™ Network. Each local group of charging stations automatically forms a robust self-healing Radio Frequency (RF) mesh network managed by a single gateway charging station—a version of the networked charging stations incorporating an embedded CDMA or GSM cellular modem in addition to RF mesh network functionality. Up to 100 charging stations can communicate to and be managed by a single gateway charging station. The gateway charging station, in turn, utilizes the local cellular network to communicate with the ChargePoint NOS, which runs on a remote secure hosted server managed by Coulomb Technologies. The ChargePoint NOS provides multiple web-based portals for drivers, charging station owners, installers, fleet operators, and utility companies.

Coulomb's ChargePoint NOS communicates with and individually controls the networked charging stations in order to provide authentication, management, and real-time control. The ability to individually control each charging station in real time allows the ChargePoint Network to be open to all drivers of plug-in vehicles. Drivers have the option of paying for a single charging session by placing a toll free call to the 24/7 number on each charging station or they can become a ChargePoint Network subscriber by going to [www.mychargepoint.net](http://www.mychargepoint.net) and choosing a monthly subscription plan that fits their lifestyle. Other future payment options include using any smart (RFID) credit/debit card to authorize a session or using a standard credit or debit card at a remote payment station (RPS) to pay for charging sessions. The ChargePoint Network has been designed with an open, standards-based architecture. Drivers who are members of other charging systems will be able to use their authorization smart cards at any ChargePoint networked charging station just like they can roam between cell phone networks.

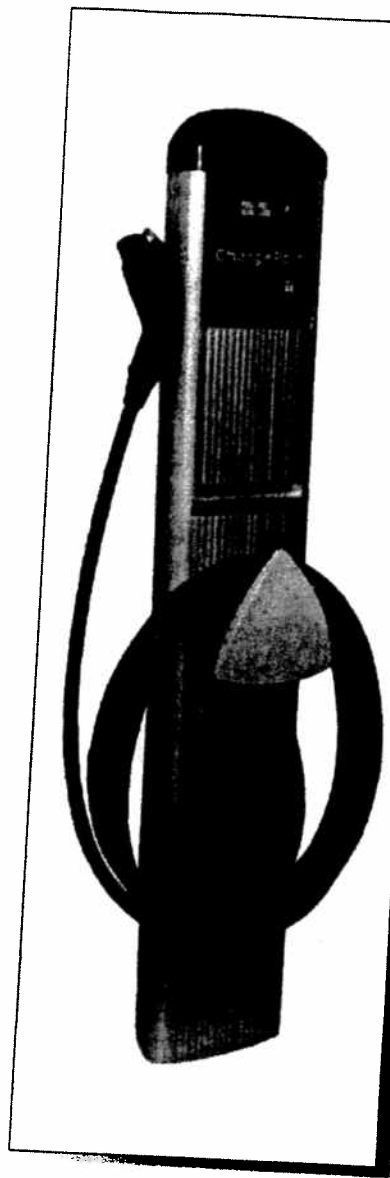
ChargePoint Networked Charging Stations perform bi-directional energy metering via an embedded utility grade electronic meter. The ability to precisely measure and report electricity use enables a sustainable, flexible business model that meets the needs of drivers, corporations, fleet operators, utility companies and municipalities. This revenue generating business model includes flexible subscriber payment methods like "free" charging, pay per use, by subscription, and by kWh (where allowed).

### NETWORKING CAPABILITIES AND BENEFITS

ChargePoint Networked Charging Stations provide unique benefits when compared to non-networked charging stations. Those benefits include:

- A charging infrastructure open to all drivers without requiring subscriptions
- A revenue stream to pay for electricity, capital equipment and maintenance
- Ability for drivers to find unoccupied charging stations via web-enabled cell phones
- Notification by SMS Text or email when charging is complete
- Authenticated access to eliminate energy theft
- Authorized energizing for safety
- Remote monitoring and diagnostics for superior quality of service
- Smart Grid integration for utility load management with future V2G capabilities
- Green House Gas savings calculation per driver and per fleet
- Fleet vehicle management

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# eTec

electric transportation  
engineering corporation

## The Leader in Clean Electric Transportation Solutions

THE  
**EV Project**

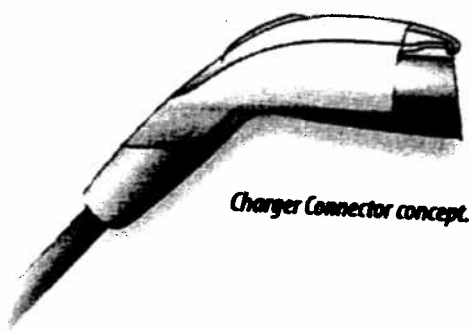
ECotality's eTec is Project Manager for  
The EV Project: The largest deployment of  
EVs and charge infrastructure in history.



an **ecotality** Company

*Nissan LEAF Zero Emission Vehicle*

# The Electric Movement



*Charger Connector concept.*



*General Motors' original EV-1.  
We've been into EVs since the 1990s.*

► Concerns with global warming, oil shortages and increasing gas prices, the rapid rise of more fuel efficient vehicles is a clear indicator of changing consumer preferences and industry direction. As major automotive manufacturers plan to launch plug-in electric vehicles (EV) in 2010, the future of transportation is propelled by a fundamental shift to cleaner and more efficient electric drive systems.

► The success of EVs is dependent on charge infrastructure that makes recharging convenient, practical and cost-efficient. eTec is a Tier I supplier of Level 2 (240V) and Level 3 (480V) battery chargers for electric vehicles in residential and commercial applications. eTec holds patented rights to the industry leading fast-charge technology, Minit-Charger™, which can provide a safe and meaningful charge for an EV in approximately 15 minutes. eTec's Minit-Charger technology will play a major role in the commercial acceptance of electric transportation technologies as it reduces range anxiety and provides a convenient solution for extended driving range.

► eTec has been involved in every North American EV initiative since 1999. With over two decades of experience in electric transportation, eTec is the most experienced and qualified solution provider for EVs and supporting infrastructure which is why eTec is trusted by automotive manufacturers, utilities, research institutes, and government agencies. With over two decades of experience in electric transportation, eTec is the most experienced and qualified solution provider for EVs and supporting infrastructure. eTec's unparalleled EV infrastructure experience, combined with its expertise in batteries, battery charging, utility activities and electric drive systems makes eTec the leader in electric transportation.

*Level 3 Fast Charge concept*

**August 5, 2009**

*The U.S. Department of Energy selects eTec to implement the largest transportation electrification project in history.*

THE **EV Project**

Through a \$99.8 million grant from U.S. DOE, eTec will install 10,950 Level 2 charge systems and 260 fast charge systems in select markets of five states: Arizona, California, Oregon, Tennessee, and Washington. Installation will accompany the deployment of 4,700 Nissan LEAFs, a zero-emission EV. Installation will accompany the deployment of up to 5,000 Nissan LEAFs, a zero-emission EV. The Project will collect and analyze data to characterize vehicle use in diverse topographic and climatic conditions, evaluate the effectiveness of charge infrastructure, and conduct trials of various revenue systems for commercial and public charge infrastructure. The ultimate goal of the Project is to develop mature charging environments to support the widespread use of EVs.

## What is an EV?

The term "EV" is used to denote all grid-connected electric vehicles, including plug-in hybrid (PHEV), range-extended (REEV) and battery electric vehicles (BEV).



# eTec EV Capabilities

**eTec supports the development and commercial application of EV technologies in the following areas:**

## **Level 2 Charge Infrastructure (240 VAC single phase)**

For a successful consumer experience, EVs require more power for charging than can be derived from a 120V convenience outlet. Therefore, Level 2 charge infrastructure will be required to support these vehicles. eTec's charging hardware is compliant with all applicable national regulations and standards. eTec is dedicated to providing complete Level 2 hardware solutions and can provide chargers with smart-grid interface, demand and energy control, and a simplified user interface.

## **Level 3 Charge Infrastructure (Fast Charge)**

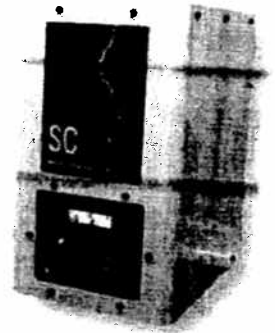
Level 3 chargers (fast charge) allow vehicles to be recharged in minutes rather than hours. With reduced charge times, public charging at retail locations becomes feasible. Utilizing eTec's patented Minit-Charger algorithm, eTec can charge batteries faster and safer than competitor's chargers. eTec's extensive fast charge experience and wide range of fast charge equipment positions us to provide universal fast chargers capable of charging any EV conforming to standard charging communication protocols.

## **Vehicle-To-Grid (V2G) Facility Demand Reduction**

eTec's bidirectional (charge and discharge) battery chargers can utilize EVs as a source of electrical energy to reduce electrical demand or shift energy consumption patterns for an EV charging facility. Reducing electrical demand and shifting the time of energy use can significantly reduce the electric costs. Enhancing bidirectional capability with eTec fast chargers, provides the ultimate flexibility in controlling facility demand and time of energy use.

## **Adaptive Intelligent Charging**

Utilizing the communication capabilities of eTec's fast-charge systems to interface with facility electric meters allows for utility regulation of charger demand and energy use through "smart" metering. Additionally, the eTec Power Manager can control local chargers to minimize facility demand and energy costs and maximize the use of energy from renewable resources.



*eTec Minit-Charger SC*

## **Public EV Charge Infrastructure**

eTec's experience with developing and installing public charge stations includes features such as access control, remote emergency phone lines, advertising space, vehicle and battery data collection, and real time messaging. eTec charge stations currently include overnight charging, fast charging and solar assisted charging.

## **Residential Time of Day Charging**

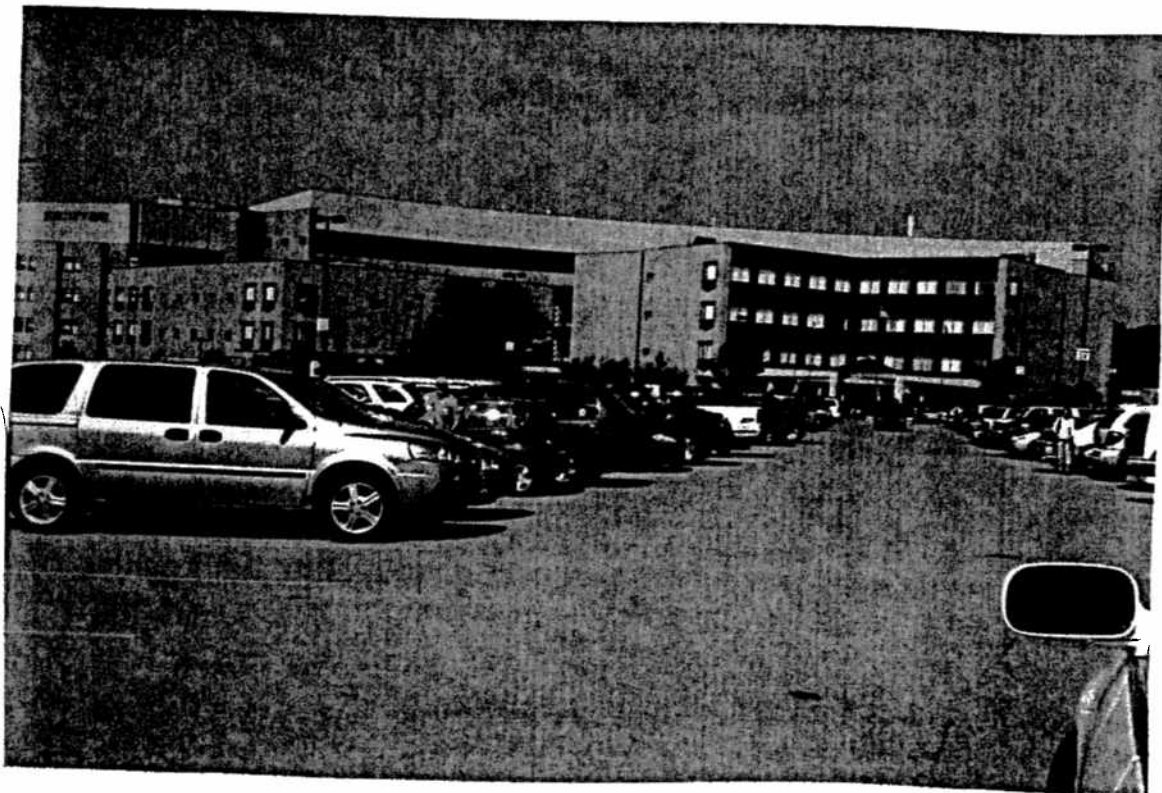
eTec EV chargers are capable of timed charging to allow residential EV users to delay the start of charging until off-peak rates are available or until renewable energy resources are online.

## **Multi-Station Demand Controlled Charge Station**

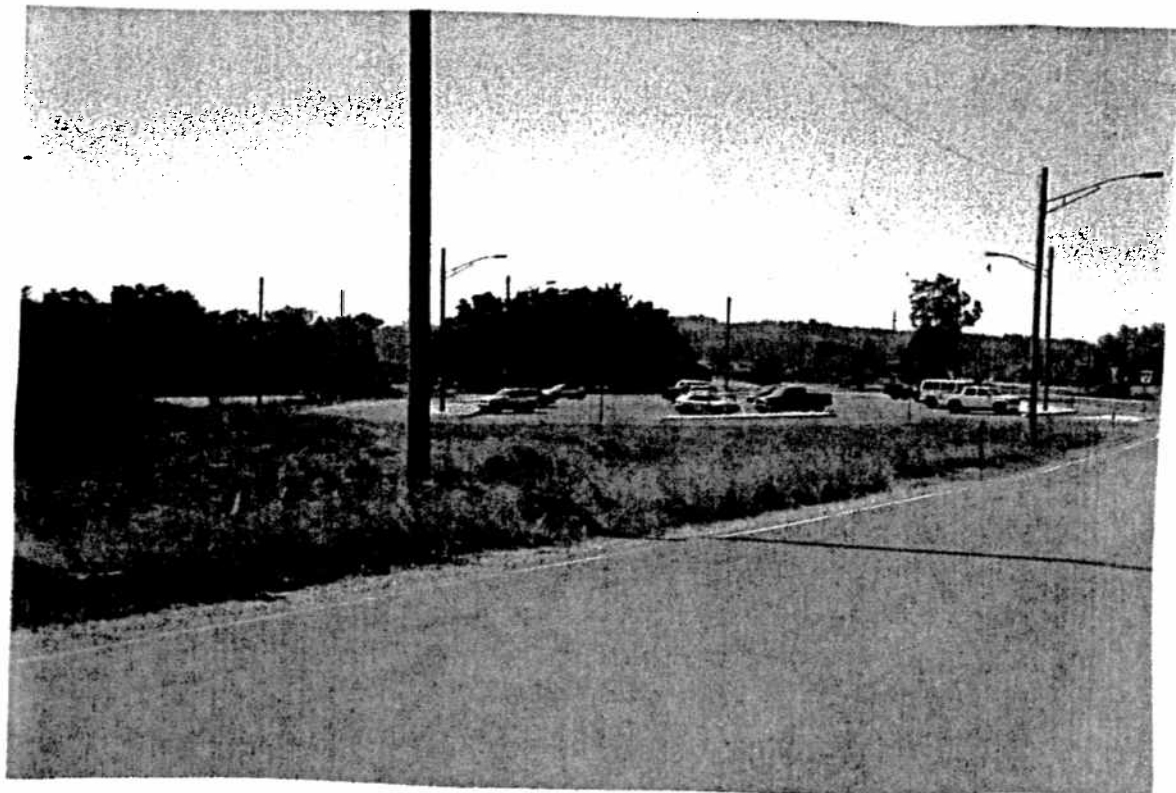
For industrial users, the eTec Power Manager offers the opportunity to minimize charge facility power demand costs by intelligently limiting the power chargers draw below a specified level while maximizing EV fleet utilization.



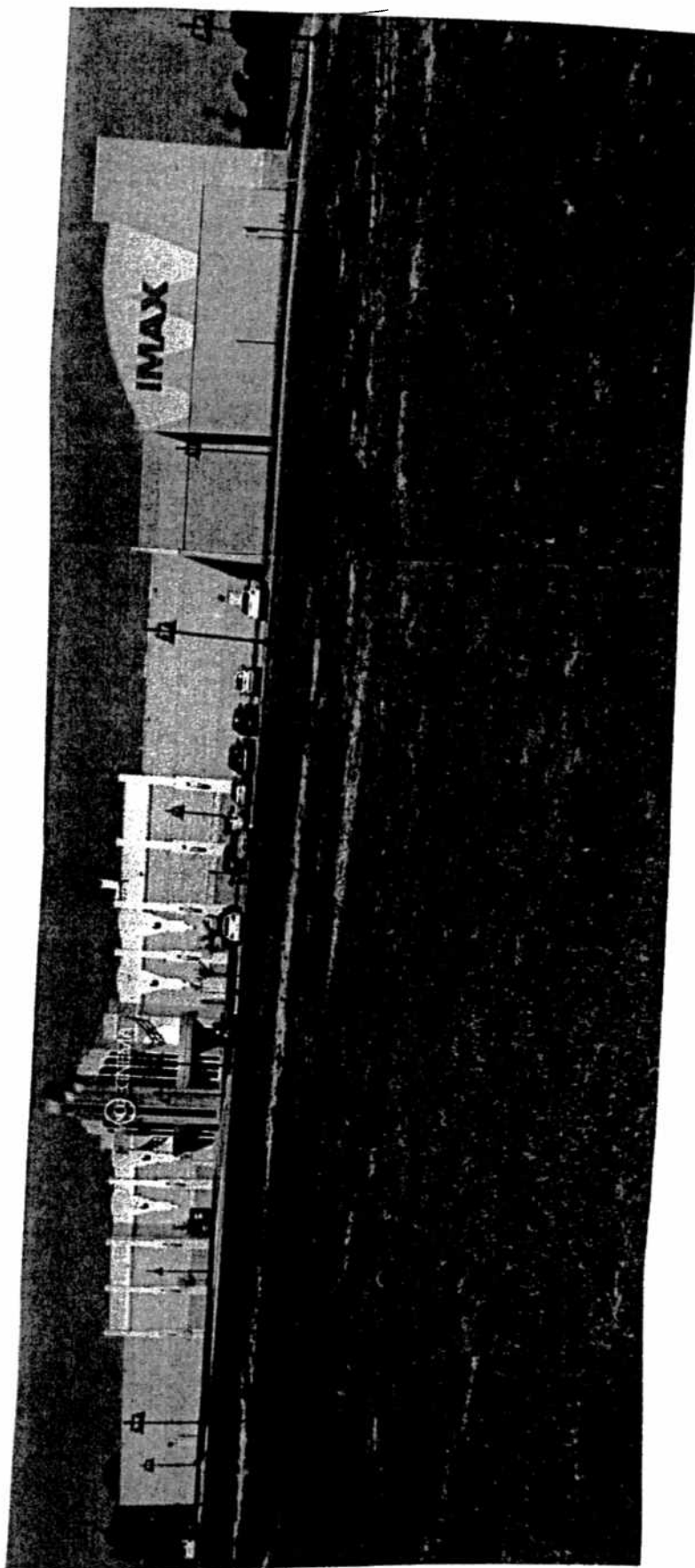
## Genesys Health Park



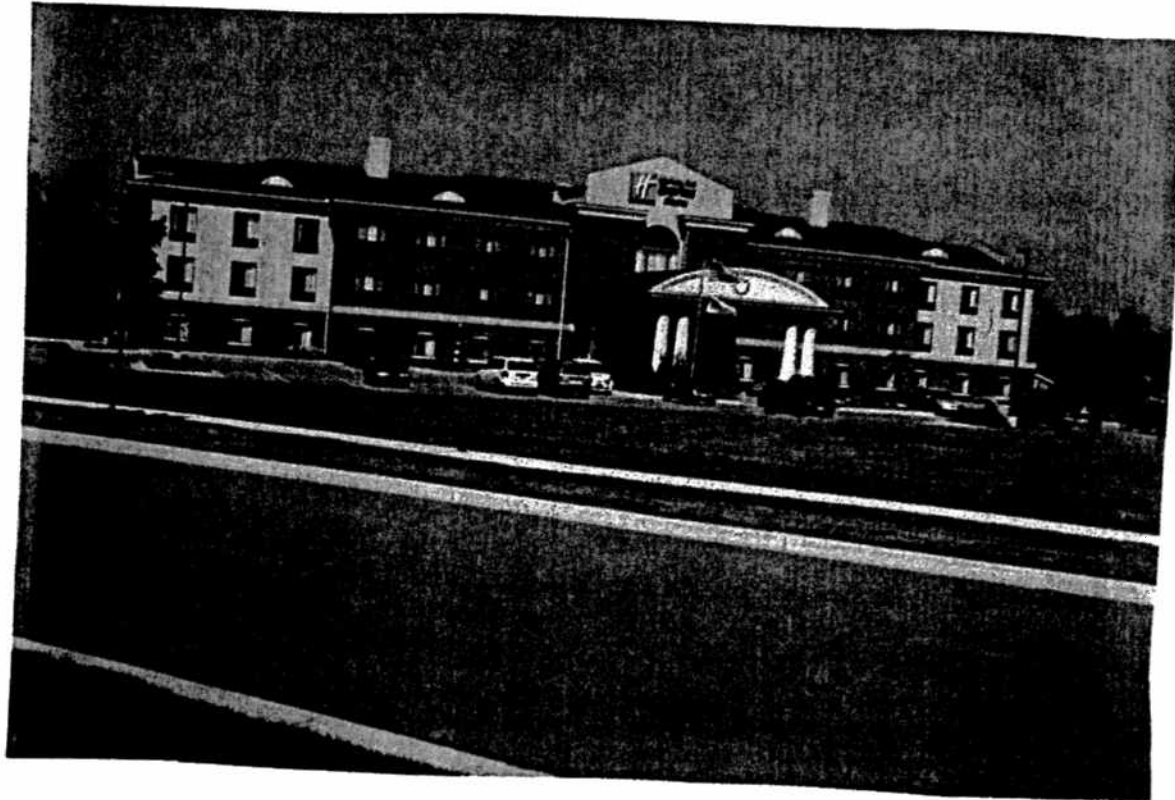
## MDOT Park and Ride



## Trillium Theater Complex



## Holiday Inn Express



## Comfort Inn

